

# HELMINTH TYPE-SPECIMENS IN THE SOUTH AUSTRALIAN MUSEUM

## III. TREMATODA

by

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### ABSTRACT

SMALES, L. R., 1983. Helminth type-specimens in the South Australian Museum. III. Trematoda, *Rec. S. Aust. Mus.* **18** (22): 503-511.

Type-specimens of 13 species of Monogenea and 70 species of Digenea are catalogued. All are from Australian or Antarctic hosts. Trematode species are listed alphabetically, according to the original name of the genus, under either Monogenea or Digenea. Where a name change has occurred the most recent name is included. The hosts are given under the name recorded by the author.

### INTRODUCTION

This is the third and final paper of a series listing the Helminth Types held by the South Australian Museum and the Australian Helminthological Collection, currently housed in the Museum. There is also a substantial collection of larval material for which the adult has not yet been described. All the specimens described have been collected from Australian or Antarctic hosts.

The species are listed in alphabetical order under the genus to which they were first assigned. Where a name change has occurred the most recent authoritative name is given. Host-species names are those used in the original descriptions.

The earliest material registered is that assembled by T. H. Johnston who was as actively interested in the trematodes as he was in the other helminth groups. The group of parasitologists he established at Adelaide University, including L. M. Angel, now Honorary Associate of the South Australian Museum and still working in the field, provided a significant contribution to knowledge of the Australian trematodes. Other Australian trematologists are now depositing type material at the Museum.

Registration numbers starting with V indicate material held in the South Australian Museum, those starting with AHC, material in the Australian Helminthological Collection. Unless otherwise stated the name Johnston refers to T. H. Johnston. The following abbreviations were used in the text: BANZARE = British, Australia and New Zealand Antarctic Research Expedition, 1929-31; AHC =

Australian Helminthological Collection; SAM = South Australian Museum; N.T. = Northern Territory; N.S.W. = New South Wales; Qld. = Queensland; S.A. = South Australia; Tas. = Tasmania; Vic. = Victoria; W.A. = Western Australia.

### CLASS TREMATODA

#### SUB-CLASS MONOGENEA

*Anoplodiscus australis* Johnston, 1930

*Aust. J. Exp. Biol. Med. Sci.* **7**: 108-12.

Holotype V8 from the fin of *Sparus australis*, Sydney Harbour, N.S.W., collector S. J. Johnston, date unknown.

Now *Anoplocotyle australis* (Johnston, 1930) Palombi, 1943.

*Calicotyle australis* Johnston, 1934

*Aust. J. Exp. Biol. Med. Sci.* **12**: 25-8.

Holotype V9 probably from the gills of *Trygouorhina fasciata*, Glenelg, S.A., collector T. H. Johnston, date unknown.

*Diplasicotyle johnstoni* Sandars, 1944

*Trans. R. Soc. S. Aust.* **68** (1): 77-81.

Types V850-1 from gills of *Agonostomus forsteri*, Mandurah, Bunbury, W.A., collector probably the author, 1943.

*Note:* Sandars did not specify a type locality for each species, but some of the type slides have a locality written in her handwriting.

*Gonoplasius carangis* Sandars, 1944

*Trans. R. Soc. S. Aust.* **68** (1): 75-7.

Holotype V848 from the gills of *Caranx georgianus*, North Beach, Rockingham, W.A., collector probably the author, 11/6/43.

*Microcotyle agouostomi* Sandars, 1945

*J. R. Soc. W. Aust.* **29**: 108-12.

Holotype V846 from the gills of *Agouostomus forsteri*, Swan R., Mandurah, Bunbury, Denmark, Albany, W.A., collector probably the author, 1942.

*Microcotyle arripis* Sandars, 1945

*J. R. Soc. W. Aust.* **29**: 114-8.

Holotype V845 from the gills of *Arripis trutta*, North Beach, Swan River, Mandurah, Bunbury, Busselton, Albany, Woodman's Point, Scarborough, Whitfords Beach, W.A., collector probably the author, 18/6/42.

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*Microcotyle gerres* Sandars, 1944  
*Trans. R. Soc. S. Aust.* **68** (1): 67-8.  
 Holotype V843 from gills of *Gerres ovoides*, Mandurah, W.A., collector probably the author, 14/4/43.

*Microcotyle helotes* Sandars, 1944  
*Trans. R. Soc. S. Aust.* **68** (1): 72-4.  
 Cotypes V841 from the gills of *Helotes sexlineatus*, Safety Bay, W.A., collector probably the author, 20/5/43.

*Microcotyle odacis* Sandars, 1945  
*J. R. Soc. W. Aust.* **29**: 123-6.  
 Holotype V842 from the gills of *Odax semifasciatus*, Albany, W.A., collector probably the author, April 1941.

*Microcotyle parasillagiuae* Sandars, 1945  
*J. R. Soc. W. Aust.* **29**: 112-4.  
 Holotype V844 from the gills of *Sillaginodes punctatus*, Albany, W.A., collector probably the author, 14/5/42.

*Microcotyle pentapodi* Sandars, 1944  
*Trans. R. Soc. S. Aust.* **68** (1): 69-70.  
 Holotype V839 from the gills of *Pentapodus milii*, Rockingham, W.A., collector probably the author, 26/4/43.

*Microcotyle scorpiis* Sandars, 1944  
*Trans. R. Soc. S. Aust.* **68** (1): 71-2.  
 Holotype V840 from the gills of *Scorpiis aequipinnis*, Safety Bay, W.A., collector probably the author, 14/1/43.

*Microcotyle temnodontis* Sandars, 1945  
*J. R. Soc. W. Aust.* **29**: 119-23.  
 Cotypes V847 from the gills of *Temnodon saltator*, Bunbury, W.A., collector probably the author, 2/4/42.

#### SUB-CLASS DIGENEA

*Apatemon (Apatemou) vitellicsiduus* Dubois & Angel, 1972  
*Trans. R. Soc. Aust.* **96** (4): 199-201.  
 Holotype V1068 from the intestine of *Biziura lobata*, Purnong and Caloot, Murray R., S.A., collector P. M. Mawson, 20/6/58.  
 Paratypes V1069, three specimens on the same slide as the holotype.

*Bancroftrema neocerotodi* Angel, 1966  
*J. Parasitol.* **52** (6): 1058-61.  
 Holotype V955 from the digestive tract of *Neocerotodus forsteri*, Qld., collector T. L. Bancroft, January 1911.  
 Paratypes V956-8, juveniles, one sectioned.

*Brachylecithum daceionis* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 122.  
 Holotype V89 from the liver of *Dacelo novae-guineae*, Bridgewater, S.A., collector P. M. Mawson, July 1973.  
 Paratypes V90, 91; AHC S15.

*Brachylecithuua hydrouyos* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 121.  
 Holotype V82 from the pancreatic ducts of *Hydromys chrysogaster*, Lily Ck., Cairns, Qld., collector C. M. Weaver, 14/2/75.  
 Paratypes V83, 84; AHC S14.

*Brachylecithum insulare* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 119-21.  
 Holotype V76 from gall bladder and bile ducts of *Rattus fuscipes*, Pearson Is., S.A., collector P. E. Hornsby, date unknown.  
 Paratypes V77, 78, 79; AHC S2.

*Brachylecithum latius* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 123-4.  
 Holotype V102 from the gall bladder of *Cracticus torquatus*, Cowell, S.A., collector P. M. Mawson, 27/5/65.  
 Paratypes V103-5; AHC S24-6.

*Brachylecithuua podargi* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 212-3.  
 Holotype V92 from the bile ducts of *Podargus strigoides*, Moggill, Qld., collector J. C. Pearson, 6/11/62.  
 Paratypes V103-5; AHC S20.

*Burnellus trichofurcatus* Angel, 1971  
*Parasitology* **62**: 375-84.  
 Holotype V977 from the intestine of *Tandanus tandanus*, Murray R., S.A., collector T. H. Johnston, L. M. Angel, dates unknown.  
 Paratypes V978-987, other paratype material in AHC.  
 Cercariae V930, V2772, Sporocysts V931 as used in the original descriptions of the juvenile stages of the life cycle by Johnston & Angel (1940a).

*Cardiocephaloides ovicorpus* Dubois & Angel, 1972  
*Trans. R. Soc. S. Aust.* **96** (4): 204.  
 Holotype V1070 from the intestine of an unknown host, no collection data, from SAM.  
 Paratypes V1071 including sectioned material.

*Catatropis gallinule* Johnston, 1928  
*Rec. S. Aust. Mus.* **4** (1): 135-8.  
 Holotype V5 from the caecum of *Gallinula tenebrosa*, Adelaide, S.A., collector probably T. H. Johnston, 1926.

*Cetioveena crassum* Manter, 1970  
*Trans. R. Soc. S. Aust.* **94**: 147-50.

Holotype V1004 from the ureter of *Thunnus thynnus maccoyii*, East Bass Strait and Kangaroo Is., S.A., collected by CSIRO, 1939.

*Coelomotrema antichinomes* Angel, 1970

*Aust. J. Zool.* **18**: 119-24.

Holotype V974, from the body cavity of *Antechinomys spenceri*, Sandringham Stn. near Bedourie, Qld., collectors P. Woolley & M. Stanley, caught 18/6/68, died 22/10/68.

Paratypes V975, 976 including sectioned material and AHC.

*Cotylurus (Cotylurus) magneacstabulus* Dubois & Angel, 1972

*Trans. R. Soc. S. Aust.* **96** (4): 204-5.

Holotype V1072 from the lower intestine of *Cygnus atratus*, Tailem Bend, S.A., collector T. H. Johnston, 25/10/45.

Paratypes V1072 (six on same slide as holotype), V1073.

*Cyclocoelum jaenschi* Johnston & Simpson, 1940a

*Trans. R. Soc. S. Aust.* **64** (2): 273-8.

Holotype V949 from the abdominal air sacs of *Podiceps novaehollandiae*, Tailem Bend, S.A., collectors G. & F. Jaensch, August 1937.

*Cercariaeum jaenschi* Cercariae V948 as used in the original descriptions of the juvenile stages of the life cycle.

*Note*: Although a type-host is not designated in the original description the type-slide has host data in T. H. Johnston's handwriting.

*Cylindrotrema cygni* Angel, 1973

*Int. J. Parasitol.* **3**: 853-7.

Holotype V1119 from the caecum of *Cygnus atratus*, Tailem Bend, S.A., collector T. H. Johnston, 20/8/51.

*Diplostomum murrayense* Johnston & Angel, 1941a

*Trans. R. Soc. S. Aust.* **65** (1): 140-4.

Holotype V952 from the digestive tract of *Chilodonias leucopareia*, Tailem Bend, S.A., collector G. & F. Jaensch & L. Ellis, 7/2/40.

Paratypes V944.

*Cercaria murrayensis* Johnston & Cleland, 1938

Cercariae V941-2, V2768, Diplostomulum V943, as used in the original descriptions of the juvenile stages of the life cycle.

*Diplostomum (Diplostomum) paryulum* Dubois & Angel, 1972

*Trans. R. Soc. S. Aust.* **96** (4): 206-8.

Holotype V1074 from the intestine of *Hydroprogne caspia*, Tailem Bend, S.A., collector T. H. Johnston, December 1939.

Paratypes V1074 (three on same slide as holotype), V1075.

*Dolichopera macalpini* Nicoll, 1914

*Parasitology* **6** (4): 333-50.

From *Notechis scutatus* and *Denisonia superba*, collected in N.S.W., S.A., Vic. and Tas., now *Dolichoperoides macalpini* (Nicoll, 1914) Johnston & Angel (1940b).

Cercariae V924-5, metacercariae V926, sporocysts V923, and sections of infected *Ameria pyramidata* V927 as used in the original descriptions of the juvenile stages of the life cycle.

*Derogenes johnstoni* Prudhoe & Bray, 1973

*BANZARE Rep. Ser. B* **8** (10): 221-2.

Cotypes V563 from *Artedidraco shackeltoni* (site in host not known), 65°48'S, 53°16'E, collector T. H. Johnston, 24/1/30.

*Note*: Prudhoe & Bray (1973) did not specify type host and type locality or designate a holotype for any of the trematodes collected by T. H. Johnston during BANZARE.

*Echinochasmus pelecani* Johnston & Simpson, 1944b

*Trans. R. Soc. S. Aust.* **68** (1): 113-9.

Syntypes V1059 from the small intestine of *Pelecanus conspicillatus*, Tailem Bend, S.A., collectors G. & B. Jaensch & L. Ellis on several occasions between 1938-44.

Cercariae V939, V2806, cysts and redia V2805, metacercariae V940, infected *Gambusia affinis* V2807 as used in the original description of the juvenile stages of the life cycle.

*Note*: Johnston & Simpson (1944) considered that a more detailed description of *E. mordax* Looss, 1899 would show that *E. pelecani* was a synonym of that species. However Yamaguti (1971) still lists *E. pelecani* separately with the note that it is probably a synonym of *E. mordax*.

*Echinoparyphium ellisi* Johnston & Angel, 1949

*Rec. S. Aust. Mus.* **9** (2): 247-54.

Type adult V902 from the duodenum of *Chenopis atratus*, Tailem Bend, S.A., collectors Messrs Jaensch & Ellis, April 1947.

*Cercaria ellisi* Johnston & Simpson, 1944a

Cercariae V903, 904, metacercariae V905, redia and cercariae V906 as used in the original descriptions of the juvenile stages of the life cycle.

*Echinoparyphium hydromyos* Angel, 1967

*Parasitology* **57**: 19-30.

Holotype V57 from the intestine of *Hydromys chrysogaster*, Tailem Bend, S.A., collector L. M. Angel, December 1959.

Paratypes V58.

Cercariae from *Planorbis isingi* V60, cysts from tadpoles and *Lenameria* sp. V59 as used in the original descriptions of the juvenile stages of the life cycle.

*Echinostoma australe* Johnston, 1928

*Rec. S. Aust. Mus.* **4** (1): 138-40.

Holotype V6 from the caecum of *Gallinula tenebrosa*, Adelaide, S.A., probably collected by T. H. Johnston, 1926.

*Echinostoma bancrofti* Johnston, 1928

*Rec. S. Aust. Mus.* **4** (1): 140-2.

Holotype V7 from the intestine of *Gallinula tenebrosa*, Burnett R., Eidsvold, Qld., collector T. L. Bancroft, 29/9/19.

*Foliotrema jecoris* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 31-2.

Holotype V1963 from the gall-bladder and bile ducts of *Dugong dugon*, Daru, Gulf of Papua, collectors 'Dugong Project' Wildlife Div. Dept. Lands and Environment, Papua New Guinea, 11/7/78.

Paratypes V1964.

*Faredifix clavata* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 41-3.

Holotype V1973 from large abscesses in the wall of the ileum of *Dugong dugon*, Mornington Is., Qld., collected by aboriginals for food, 11/11/76.

Paratypes V1974-6 including sectioned material.

*Galactosomum angelae* Pearson, 1973

*Phil. Trans. R. Soc. Lond. B* **266** (879): 361.

From the small intestine of *Hydroprogne caspia*, Port R., S.A., collector unknown, September 1928, donated by L. M. Angel.

Paratypes V1029.

*Galactosomum bearupi* Pearson, 1973

*Phil. Trans. R. Soc. Lond. B* **266** (879): 368.

From the small intestine of *Hydroprogne caspia*, Townsville, Qld., collector A. J. Bearup, 20/8/68.

Paratypes V1030.

*Galactosomum renicola* Pearson, 1973

*Phil. Trans. R. Soc. Lond. B* **266** (879): 409.

From the renal ureter of *Puffinus pacificus*, Heron Is., Qld., collector probably the author, 6/3/68.

Paratypes V1031.

*Galactosomum sinuilactis* Pearson, 1973

*Phil. Trans. R. Soc. Lond. B* **266** (879): 415.

From the bursa of *Phalacrocorax varius*, Moreton Bay, Qld., collectors R. Groom & R. Greenhill, 25/7/69.

Paratypes V1032.

*Haerator caperatus* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 44-7.

Holotype V1977 from the ileum of *Dugong dugon*, Mornington Is., Qld., collected for food by aboriginals, 2/8/78.

Paratypes V1978-1 including sectioned material.

*Haplorchis parapumilio* Pearson & Ow-Yang, 1982

*S-E Asian J. Trop. Med. Pub. Health* **13**: 37.

From *Phalacrocorax pygmaeus*, from the small intestine, Pulau Rambut, Jakarta Bay, Java, collector D. Supriadi, 23/6/77.

Paratype V2752.

*Haplorchis paruvanissimus* Pearson & Ow-Yang, 1982

*S-E Asian J. Trop. Med. Pub. Health* **13**: 50.

From *Nycticorax calendonicus*, from the lower small intestine, Brisbane Botanic Gdns, Qld., collector J. C. Pearson, 8/1/62.

Paratype V2752.

*Harveytrema bisculatum* Kruse, 1979a

*J. Parasitol.* **65** (6): 918-20.

Holotype V1677 from the intestine of *Achoerodus gouldi*, Pearson Is., S.A., collector P. M. Mawson, February 1960.

Paratype V1678 (sectioned), AHC S290.

*Helicometra scorpaenae* Prudhoe & Bray, 1973

*BANZARE Rep. Ser. B* **8** (10): 213.

Cotypes V458-9, from *Scorpaena cruenta*, 42° 40'S, 148° 27' 30"E off Maria I., Tas., collector T. H. Johnston, 23/3/31.

*Hemistomum intermedium* S. J. Johnston, 1904

*Proc. Linn. Soc. N.S.W.* **1904**: 109-110.

now *Apatemon intermedium* (S. J. Johnston, 1904)

T. H. Johnston & Angel, 1951b.

Substitute type V870 from the duodenum of *Chenopis atrata*, Duckmaloi R., N.S.W., collector T. H. Johnston.

*Cercaria lessoni* V872-3, 875 metacercariae V874,

876, cysts V877 as used in the original description of the juvenile stages of the life cycle by Johnston & Beckwith, 1947a.

*Note*: The slide deposited in SAM is designated "substitute type" in T. H. Johnston's handwriting and is from material collected at Tailem Bend, S.A. Attempts by Johnston & Angel, 1951b, to trace the original material, were unsuccessful.

*Heterophyes bitoquatus* Pearson & Pearson, 1983

*Sarawak Mus. J.* **29**: 171-189.

From *Sterna bergii*, site in host not given, Buntal, Sarawak, collector Guan anak Sureng, 15/12/76.

Paratypes V2607.

*Heterophyes chini* Pearson & Pearson, 1983

*Sarawak Mus. J.* **29**: 171-189.

From *Sterna bergii*, site in host not given, Buntal, Sarawak, collector Guan anak Sureng, 15/12/76.

Paratypes V2605-06.

*Isoparorchis tandani* Johnston, 1927

*Trans. R. Soc. S. Aust.* **51**: 129-33.

Lectotype V3089 from the gas bladder of *Tandanus tandanus*, Qld., collectors T. L. Bancroft & M. J. Mackerras, date unknown.

Syntypes V3090.

*Note:* This material was found in T. H. Johnston's slide collection. The labels indicated that it must have been the original material. L. M. Angel designated the slides lectotype and syntypes.

*Labicola elongata* Blair, 1979

*Ann. Parasitol. Hum. Comp.* **54** (5): 521-6.

Holotype V1679 from the upper lip of *Dugong dugon*, accidentally drowned in nets used by shark-meshing contractors and given to the dugong research group, James Cook University, Townsville, Qld.

Paratypes V1680-4 including sectioned material.

*Lankatrema minutum* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 23-4.

Holotype V1954 from cardiac glands of the stomach of *Dugong dugon* collected for food by aboriginals, Mornington Is., Gulf of Carpentaria, 4/8/75.

Paratypes V1946-8 including sectioned material.

*Lankatrema microcotyle* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 24-7.

Holotype V1949 from the wall of the ileum of *Dugong dugon*, collected for food by aboriginals, Mornington Is., Gulf of Carpentaria, 2/8/78.

Paratypes V1950-3 including sectioned material.

*Lankatrema macrocotyle* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 27-8.

Holotype V1954 from the wall of the ileum of *Dugong dugon*, collected for food by aboriginals, Mornington Is., Gulf of Carpentaria, 2/8/78.

Paratypes V1955-6 including sectioned material.

*Lankatremoides gardneri* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 29-31.

Holotype V1957 from pancreatic ducts of *Dugong dugon*, collected for food by Torres Strait Islanders, Thursday Is., Qld., 3/11/76.

Paratypes V1958-62 including sectioned material.

*Lecithaster australis* Prudhoe & Bray, 1973

*BANZARE Rep. Ser. B* **8** (10): 218.

Cotypes V503-21, site in host not given, from *Notothenia* spp. and three other hosts, near head of Bras Bossière, Kerguelen and eight other localities, collector T. H. Johnston, 20/21/29.

Syntypes V735.

*Lepocreadium angelae* Kruse, 1981

*Proc. Helm. Soc. Wash.* **48**: 195-97.

From *Scorpius georgianus*, Pt Willunga, S.A., collector probably T. H. Johnston, February, 1934.

Paratypes V2753-64.

*Leucochloridium australiense* Johnston & Simpson, 1940b

*Trans. R. Soc. S. Aust.* **64** (1): 119-24.

Holotype V960 from the cloaca of *Pomatostomus superciliosus*, Elwomple, near Taillem Bend, S.A.,

collector F. Jaensch, August 1938.

Cercariae V959 as used in the original description of the juvenile stages by Johnston & Cleland, 1938.

*Lutzirema ailuroedi* Angel & Pearson, 1977

*Trans. R. Soc. S. Aust.* **101** (5): 127-9.

Holotype V108 from bile duct and mouth of gall bladder of *Ailuroedus crassirostris*, Mt Glorious, Qld., collector K. E. Webber, 29/10/62.

Paratypes V109-11; AHC S28.

*Macropotrema pertinax* Blair, Beveridge & Speare, 1979

*Ann. Parasitol.* **54** (6): 585-92.

Holotype V1831 (serial sections) from the caecum of *Macropus agilis*, Yabulu, Qld., collector I. Beveridge, 20/8/78.

Paratypes V1832-6 including sectioned material.

*Mawsonotrema eudyptulae* Angel, 1973

*Int. J. Parasitol.* **3**: 857-9.

Holotype V1120 from ducts of liver of *Eudyptula minor*, Brighton Beach, S.A., collector, from the Institute of Medical and Veterinary Science, S.A., 11/7/72.

Paratypes V1121 including sectioned material; AHC S33-5.

*Mesostephanus neophocae* Dubois & Angel, 1976

*Bull. Soc. Neuchat. Sci. Nat.* **99**: 29-32.

Holotype V75 from intestine of *Neophoca cinerea*, Gulf St Vincent, S.A., collector G. Dubois, 29/1/75.

Paratypes, four specimens on same slide as holotype, AHC S31, S32.

*Monostephanostomum manteri* Kruse, 1979b

*J. Parasitol.* **65** (6): 921-3.

Holotype V1911 from intestine of *Arripis georgianus*, Port Willunga, S.A. (February, 1934), Gulf St Vincent, S.A. (April, 1964), collectors T. H. Johnston, and from the Adelaide Fish Market.

Paratype V1912; AHC S306.

*Neodiplostomum intermedium* Pearson, 1959

*Parasitology* **49** (1 & 2): 111-9.

From small intestine of *Rattus assimilis*, edge of rain forest, Mt Glorious, Qld., collector probably the author, 1956-7.

Paratypes V836-8.

*Neodiplostomum (Neodiplostomum) lanceolatum*

Dubois & Angel, 1972

*Trans. R. Soc. S. Aust.* **96** (4): 209-10.

Holotype V1076 from intestine of *Ninox novaeseelandiae*, Adelaide, S.A., collector P. M. Mawson, April 1959.

Paratypes V1077, four specimens on same slide as holotype.

*Neodiplostomum (Triloborchidiplostomum) diaboli*

Dubois & Angel, 1972

*Trans. R. Soc. S. Aust.* **96** (4): 210-2.

Holotype V1078, site in host unknown, from *Sarcophilus harrisi*, Tas., collector B. Munday, October 1969.

*Neolepidapedon antarcticus* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 204-5.

Cotypes V406-9 from pyloric caeca of *Coryphaenoides whitsoni*, 66° 21'S, 58° 50'E., collector T. H. Johnston, 7/1/30.

*Neolepidapedon dubius* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 205-6.

Cotypes V410-12, V732 from pyloric caeca of *Coryphaenoides whitsoni*, 66° 21'S, 58° 50'E., collector T. H. Johnston, 7/1/30.

*Neolepidapedon helicoleni* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 208.

Cotypes V418-24, site in host unknown, from *Helicolenus percooides* and *Scorpaena cruenta*, 42° 40'S, 148° 27' 30"E, off Maria Is., Tas., collector T. H. Johnston, 23/3/31.

*Neolepidapedon trematoni* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 206.

Cotypes V413-7, site in host unknown, collected during AAE 1911, hosts and localities *Trematomus hansonii* 65° 42'S, 92° 10'E. *Trematomus scottii* 65° 20'S, 95° 27'E. *Austrolycichthys brachycephalus* 65° 6'S, 95° 27'E.

*Opisthotrema australe* Blair, 1981

*Aust. J. Zool. Suppl. Ser.* **81**: 9-10.

Holotype V1934 from eustachian tubes and middle ear of *Dugong dugon*, collected for food by Torres Strait Islanders, Thursday Is., Qld., 3/11/76.

Paratypes V1735-9 including sectioned material.

*Opecoelus scorpaenicola* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 209-10.

Cotypes V433-49, site in host unknown, from *Helicolenus percooides*, *Scorpaena cruenta*, and *Lepidoperca tasmanica*, 42° 40'S, 148° 27' 30"E, off Maria Is., Tas., collector T. H. Johnston, 23/3/31.

*Pancreatrema meliphagae* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 129-30.

Holotype V112 probably from bile duct of *Meliphaga ornata*, Blanchetown, S.A., collector P. M. Mawson, April 1965.

*Paraneocreadium australiense* Kruse, 1978  
*J. Parasitol.* **64** (3): 398-400.

Holotype V1496 from intestine of *Psilocranium nigricans*, Aldinga Reef, S.A., collector P. M. Mawson, 1962.

Paratypes V1497-1501 including sectioned material.

*Parorchis acanthus* var. *australis* Angel, 1954  
*Trans. R. Soc. S. Aust.* **77**: 164-73.

Holotype V988 from intestine of *Larus novae-hollandiae*, Glenelg, S.A., collector T. H. Johnston, 1939.

Paratypes AHC S189.

Cercariae V991-2, metacercariae V994, redia V900, cysts V993, and immature adult V898 as used for the original description of the life cycle.

*Pharyngostomoides dasyuri* Dubois & Angel, 1972  
*Trans. R. Soc. S. Aust.* **96** (4): 213-4.

Holotype V1079 from small intestine of *Dasyurus viverrinus*, Icena Estate, Tas., from the collection of J. C. Pearson, 9/11/66.

Paratypes V1080.

*Petasiger australis* Johnston & Angel, 1941b  
*Trans. R. Soc. S. Aust.* **65** (2): 285-91.

Holotype V917, site probably intestine of *Podiceps poliocephalus*, Tailem Bend, S.A., collectors G. & F. Jaensch & L. Ellis, May 1941.

*Cercaria gigantura* V918-20, V2970, cysts V921 and metacercariae V922 as used for the original description of the life cycle by Johnston & Angel.

*Note*: a type host was not designated in the original description but on the slide deposited in SAM *Podiceps poliocephalus* is written as the host in T. H. Johnston's own handwriting.

*Plagiorchis jaenschii* Johnston & Angel, 1951a  
*Trans. R. Soc. S. Aust.* **74** (1): 49-58.

Holotype V858 from small intestine of *Hydromys chrysogaster*, Tailem Bend, S.A., collectors G. G. and Bryce Jaensch between May 1938 and December 1949.

Cercariae V859-60, V3794, sporocysts V861, cysts V2795, V863, metacercariae V862. Infected *Limnua lessoni* V2796, as used in the original descriptions of the life cycle.

*Postmonorchis variabilis* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 202-3.

Cotypes V387-99, site in host unknown, from *Notothenia cyanobrancha*, Port Jeanne d'Arc, Kerguelen, 10/2/30 and Green Harbour, Kerguelen; *Notothenia acuta*, near head of Bras Bossière, Kerguelen, 20/11/29; *Notothenia rossi* 49° 28'S, 70° 33'E off entrance to Royal Sound, Kerguelen, 21/3/30; *Harpagifer hispinus*, Port Jeanne d'Arc, 16/2/30, collector T. H. Johnston.

*Probolitrema clelandi* Johnston, 1934

*Aust. J. Exp. Biol. Med. Sci.* **12**: 29-31.

Holotype V12 from body cavity of *Mustelus antarcticus*, Encounter Bay, S.A., collector J. B. Cleland, January, 1922.

*Probolitrema rotundatum* Johnston, 1934  
*Aust. J. Exp. Biol. Med. Sci.* **12**: 28-9.

Holotype V10 from abdominal cavity of *Trygonorrhina fasciata*, Kangaroo Is., S.A., collector C. J. Hackett, 1933.

*Probolitrema simile* Johnston, 1934  
*Aust. J. Exp. Biol. Med. Sci.* **12**: 31-2.

Holotype V11 from body cavity of *Mustelus antarcticus*, Encounter Bay, S.A., collector J. B. Cleland, January 1922.

*Prototransversotrema steeri* Angel, 1969  
*Parasitology* **59**: 719-24.  
Holotype V970, under scales of *Aldrichetta forsteri*, North Arm, Port R., S.A., collector B. Steer, July 1968.  
Paratypes V971-3.

*Pseudopocoechus pyriformis* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 210-2.  
Cotypes V450-3, site in host unknown, from *Callanthias allporti*, 42° 40'S, 148° 27' 30"E, off Maria Is., Tas., collector T. H. Johnston, 23/3/31.

*Prosthogonimus vitellatus* Nicoll, 1914  
*Int. J. Parasitol.* **3** p. 859—redescription by Angel, 1973.

Type host *Chibia braceolata*. Since the holotype, located at the School of Public Health and Tropical Medicine Sydney, was found to be imperfect six specimens V1122 from *Gymnorhina tibicen leucornata*, Tailem Bend, S.A., have been deposited in SAM, collector T. H. Johnston, 1/6/40.

*Skrjabinosomum mawsoni* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 124-6.  
Holotype (lateral mount) V96 from liver of *Manorina flavigula*, Port Augusta, S.A., collector SAM, May 1965.  
Paratypes V96 (dorsal mount) on same slide as holotype and V97; AHC S18.

*Skrjabinosomum pomatostomi* Angel & Pearson, 1977  
*Trans. R. Soc. S. Aust.* **101** (5): 126-7.  
Holotype V99 from liver of *Pomatostomus superciliosus*, The Bunkers, Flinders Ranges, S.A., collector SAM, 22/7/65.  
Paratypes V99, six specimens on same slide as holotype and V100, V101.

*Stictodora diplacantha* Johnston, 1942  
*Trans. R. Soc. S. Aust.* **66** (2): 239-40.  
Holotype V852, site in host not given, from *Phalacrocorax varius*, Port Gawler, S.A., collector probably T. H. Johnston, date unknown.

*Stenakron kerguelense* Prudhoe & Bray, 1973  
*BANZARE Rep. Ser. B* **8** (10): 214-6.  
Cotypes V465-83, V733, site in host not given, from *Notothenia coriiceps* Heard Is., 28/9/29; *Notothenia cyanobrancha* from various stations at Ker-

guelen between 16/11/29 and 15/2/30; *Champsocephalus gunnari* 49° 28'S, 70° 33'E off entrance to Royal Sound, Kerguelen, 2/3/30; *Zanclorhynchus spinifer* 54° 42' 30"S, 158° 54' 30"E, off Lustitania Bay, Macquarie Is., collector T. H. Johnston, 4/12/30.

*Tandanicola bancroftii* T. H. Johnston, 1927  
*Trans. R. Soc. S. Aust.* **51**: 133-6.  
Cotypes V3088, from the gas bladder of *Tandanus tandanus*, Burnett R., Eidsvold, Qld., collectors T. L. Bancroft and M. J. Mackerras, date unknown.

## CERCARIA

*Cercaria acetabulopapillosa* Angel & Mantel, 1972  
*Ann. Inst. Biol. Univ. Nat. Auton Mexico* **41** Ser. Zool. 1: 5-9.

Cercariae and metacercariae, V1007-12; redia V1008, redia and cercariae V1013; infected *Platopsis tetrica* with redia and cercariae V1014; cysts V1015.

*Cercaria amerianna* Johnston & Beckwith, 1947a  
*Rec. S. Aust. Mus.* **8** (4): 575-782.  
Cercaria, V880, V2799; diplostomula and sporocysts V881, V882, V2880, infected *Limnodynastes* sp. V2801.

*Cercaria ancyli* Johnston & Beckwith, 1947b  
*Trans. R. Soc. S. Aust.* **71** (2): 324-8.  
Cercaria 2788, V884, sporocysts V883; infected *Ameria pyramidata* V2787.

*Cercaria angelae* Johnston & Simpson, 1944a  
*Trans. R. Soc. S. Aust.* **68** (1): 130-2.  
Cercariae V888, V2789; sporocyst V887; tetracotyle V889-91: from *Amerianna pyramidata* and *A. tenuirostra*.

*Cercaria beckwithae* Johnston & Angel, 1949b  
*Trans. R. Soc. S. Aust.* **73** (1): 22-7.  
Cercariae V2778, V895, V896; infected *Planorbis isingi* V2779-80.

*Cercaria clelandi* Johnston & Angel, 1939  
*Trans. R. Soc. S. Aust.* **63** (2): 200-3.  
Cercaria V950, V2766; redia V951: from *Planorbis isingi*.

*Cercaria gigantura* var. *grandior* Johnston & Simpson, 1944a  
*Trans. R. Soc. S. Aust.* **68** (1): 128-30.  
Cercaria V893, V2790; redia V892-3; metacercaria V894; infected *Amerianna pyramidata* V2792.

*Cercaria haswelli* Dolfuss, 1927  
*Sobrito del libro Homenaje al Dr. Eduardo Caballero y Caballero Mex.* 1960: 75-85.  
Haswell's 1903 material, redescribed Angel, 1960.  
Cercariae and sporocysts V1054.

- Cercaria jaenschi* Johnston & Cleland, 1937  
*Trans. R. Soc. S. Aust.* **61**: 202-6.  
Cercariae V1057; infected *Lenameira* sp. V1055; infected *Amira pyramidata* serial sections, V1058.
- Cercaria lethargica* Johnston & Muirhead, 1949  
*Trans. R. Soc. S. Aust.* **73** (1): 106-8.  
Cercariae V868, V2783; metacercariae V869; sporocysts V867; cysts V2784; from *Plotopsis tatei*.
- Cercaria lophosoma* Johnston & Beckwith, 1947b  
*Trans. R. Soc. S. Aust.* **71** (2): 328-333.  
Cercaria V886, V2785; sporocysts V885; infected *Notopala hanleyi* V2786.
- Cercaria metalina* Johnston & Angel, 1942  
*Trans. R. Soc. S. Aust.* **66** (1): 50-9.  
Cercaria V908-9, V2769; sporocysts V907; sporocysts with diplostomula V910-3; diplostomula V914-6: from *Planorbis isingi*, *Amerianna pyramidata* and *A. tenuirostra*.
- Cercaria natans* Johnston & Muirhead, 1949  
*Trans. R. Soc. S. Aust.* **73** (1): 102-6.  
Cercariae, V865, V2781; metacercariae V866; redia V864; infected *Planorbis isingi* V2782.
- Cercaria notopalae* Johnston & Beckwith, 1945  
*Trans. R. Soc. S. Aust.* **69** (2): 234-41.  
Cercaria (furcocercaria) V879, V2775; sporocysts V878; infected *Notopala hanleyi* V2776.
- Cercaria parocellata* Johnston & Simpson, 1939  
*Trans. R. Soc. S. Aust.* **63** (1): 63-5.  
Cercariae V945-6, V2773; from *Lymnaea lessouii*.
- Cercaria plotiopsis* Johnston & Simpson, 1939  
*Trans. R. Soc. S. Aust.* **63** (1): 65-8.  
Cercariae V947, V2774; from *Plotopsis tatei*.
- Cercaria tatei* Johnston & Angel, 1940a  
*Trans. R. Soc. S. Aust.* **64** (2): 334-9.  
Cercariae V932-4, V2771; metacercariae V938; sporocysts and cysts V935-7: from *Plotopsis tatei*.
- Cercaria tetradena* Johnston & Beckwith, 1945  
*Trans. R. Soc. S. Aust.* **69** (2): 229-33.  
now *Cercaria tetradenoidea* (Johnston & Beckwith, 1945) Johnston & Angel, 1940b.  
Cercaria (furcocercaria) V928, V2777; sporocysts V929: from *Plotopsis tatei*.
- Cercaria velesunionsis* Angel, 1961  
*Trans. R. Soc. S. Aust.* **84**: 63-70.  
Cercariae V998-99, V1003; metacercariae V995-7, V1002, young adults V1000-1: from *Velesunio ambiguus*.

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